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Restoration Advisory Board Newsletter

Dear RAB members and others with interest! The November meeting provided the usual site updates by Steve Granade and Steve McCarel, as well as a presentation by Mike Gonzales regarding overall DoD goals for the IR program. Mike also provided specific information about FY03 work planned at Hueneme and Mugu. At the March meeting, Steve Granade will discuss the Mugu Lagoon Ecological Risk Assessment results.

Please congratulate Steve McCarel on his new position at the Engineering Service Center. Steve has been with the RAB since the beginning and he will be missed. Also, you may remember another charter member, Lee Roth. Lee passed away last fall.

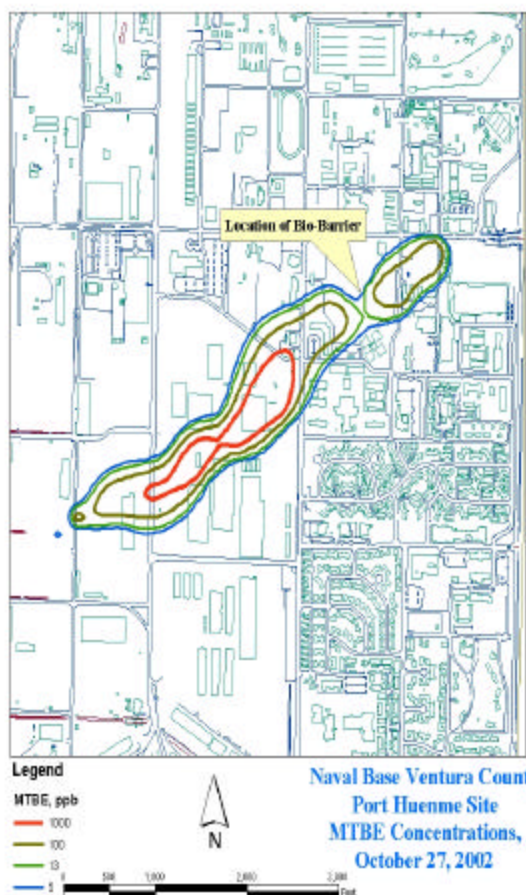
HUENEME

MTBE Plume

The fourth quarter groundwater sampling results show that the experimental bio-barrier undergoing test and evaluation by Naval Facilities Engineering Service Center (NFESC) in partnership with Arizona State University is performing very well. As you can see in Figure 1, the plume has been virtually cut in half at the location of the bio-barrier. We believe that the plume is actually separated into two sections even though the figure shows it as "necking down". The plume as drawn on Figure 1 is based on 37 groundwater samples taken in and around the total plume area. These samples help determine the general characteristics of the total plume movement. The contouring program, developed by Battelle Laboratories, does not have sufficient data to show a total separation. However, NFESC sampling results clearly show the groundwater to be free of MTBE just down gradient of the bio-barrier.

Based on these results, the Navy has decided to incorporate the bio-barrier technology into the final remedy for controlling and containing the MTBE plume. The

pump and treat system at the toe of the plume is designated as an interim remedy. Naval Engineering Field Division, Southwest (SWDIV) is coordinating the contract efforts to design and construct the final remedy,



which will include the use of the bio-barrier technology at the toe of the plume as a replacement for the pump and treat system. Since the bio-barrier is a passive system in which the groundwater flowing through the barrier is effectively reduced via natural biodegradation processes, the selection of this technology will save the cost of extracting groundwater and putting it into the sanitary sewer system. Additionally, the Navy will experience significant savings from expensive ongoing maintenance that is required due to the high iron content in the groundwater.

The final remedy will include the installation of a second bio-barrier that will be located approximately in the middle of the longitudinal axis of the plume and extend totally across the plume. The original bio-barrier will continue to operate. This will effectively reduce the time of treatment and, hence, the overall cost.

SITE 19, THE HARBOR

Dredging the harbor continues to be in the planning stages because the harbor is in the IR program. Recall that the Army Corps of Engineers (ACE) in partnership with the Oxnard Harbor District (OHD) wants to deepen the major areas of the harbor approximately 5 feet. The deepening would lower the harbor depth to 40-feet. The Navy also has a need to conduct maintenance dredging around each berth, as well as deepen the north portion of the harbor 2-feet for a new operational requirement. An additional sampling program conducted in the north harbor detected slight contamination. The ACE is considering four options for depositing dredge soil taken from contaminated areas:

- Dredge only areas determined to be clean. This works if the non-dredged portions do not interfere with port operations.
- Dredge the problem areas and transport to a Class III landfill. A Class III landfill is a sanitary landfill that receives RCRA waste.
- Transport highly contaminated dredge soil to a Class I hazardous waste landfill.
- Barge the dredged soil to the Port of Long Beach for use as fill. Legal staffs are evaluating this option.

MUGU

SEMI-PERCHED AQUIFER

Two years ago, the Navy presented the Los Angeles Regional Water Quality Control Board with data that showed water quality in the semi-perched aquifer at Mugu to be very poor, and requested that it be designated non-potable. The Board informally agreed. The Los Angeles Region Basin Plan (1994), which designates beneficial uses of water within the Basin, is currently under review. The Board has agreed to amend the Plan, removing the potable water beneficial use designation from the semi-perched aquifer at Mugu. This is helpful because IR cleanups at Mugu can be based on risk based levels using standards established by CalEPA instead of drinking water MCLs. This will result in significant cost savings but will still be protective of human health and the environment.

ECOLOGICAL RISK ASSESSMENT

The draft assessment is being reviewed. Preliminary findings indicate:

- Some risk to herbivorous and omnivorous birds (those that eat invertebrates such as clams, worms and insects).
- The risk is coming from metals such as chromium, cadmium and selenium and pesticides.
- Most of the chromium and cadmium are likely to have come from Navy plating operations; selenium and pesticides appear to be coming from Calleguas Creek/Revolon Slough.

To quantify current and predict future sediment and contaminant loading from the watershed, a water quality monitoring station was installed in Calleguas Creek at 11th Street and Las Posas Road. The station continuously monitors flow volume and turbidity. Periodic sampling of total suspended sediments and contaminants will be conducted to help to fully evaluate the health of the Lagoon.

That's our news since November. Please make plans to join us on March 6th. If you have any questions, please don't hesitate to call me, Gail Pringle, at 982-2969 or e-mail Gail.Pringle@navy.mil